

#### ABSTRACT OF THE DISCLOSURE

Techniques are used to determine when interfering beams of light are precisely aligned at the core of the fiber when a laser interferometer is used to burn diffraction gratings into optical fibers. Two alternative methods are disclosed for performing this function, namely, refraction of the UV fluorescence through the fiber onto a paper or screen, and 5 alternately interrupting the left and right UV beams, then directly observing the fluorescence pattern of the UV beam on the fiber core to determine alignment.